

LISTING OF THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1.-6. (Cancelled)

7. (Previously Presented) A semi-floating vehicle wheel bearing apparatus coupled with an axle housing structured as a unit of a wheel hub and a double row rolling bearing comprising:

an inner member including a wheel hub integrally formed with a wheel mounting flange on one end, a central bore with an inboard side end and an outboard side end formed in the wheel hub, an inner circumferential surface of the central bore of the wheel hub is formed with a serration for engaging a drive shaft that passes into the inboard side end of the central bore, an axially extending cylindrical portion with a pair of inner raceway surfaces extend from the flange;

one or more inner rings being press-fit onto the cylindrical portion of the wheel hub, the one or more inner rings are formed with at least one of the inner raceway surfaces on its outer circumferential surface;

an outer member is arranged around the inner member, the outer member is formed with double row outer raceway surfaces on its inner circumferential surface opposite to the inner raceway surfaces;

double row rolling elements are arranged between the inner and outer raceway surfaces of the inner member and the outer member;

a cage freely rollably holds the rolling elements;

seals seal an annular space between the inner member and the outer member;

a differential axle housing connected to the outer member and extending along the drive shaft; and

a partition wall is integrally formed on the wheel hub at its outboard side to close the outboard side end of the central bore of the wheel hub, the partition wall increases the rigidity of the wheel hub to suppress an elastic deformation of the wheel hub even though the moment load is applied to the wheel hub during running of the vehicle, and the partition wall prevents ingress of rain water or dust from an end portion of the drive shaft and thus into the differential gear oil.

8. (Previously Presented) The vehicle wheel bearing apparatus of claim 7 wherein at least one of said inner raceway surfaces is formed directly on the outer circumferential surface of the wheel hub.

9. (Previously Presented) The vehicle wheel bearing apparatus of claim 7 wherein the end of said cylindrical portion is plastically deformed radially outward to form a caulked portion for preventing the inner ring from slipping off of the cylindrical portion of the wheel hub.

10. (Previously Presented) The vehicle wheel bearing apparatus of claim 9 wherein an outer circumferential region of the wheel mounting flange from an inboard base side to the axially extending cylindrical portion is hardened by high frequency

induction hardening to have a surface hardness of about 58~64 HRC, and the caulked portion remains unhardened to have a surface hardness of 25 HRC or less after forging.

11. (Previously Presented) A semi-floating vehicle wheel bearing apparatus comprising an axle housing supported under a body of a vehicle; a drive shaft inserted into the axle housing; and the vehicle wheel bearing apparatus of claim 7 arranged between the drive shaft and an opening of the axle housing; and the drive shaft is connected to said inner member so that torque is transmittable between the two.

12. (Previously Presented) The semi-floating vehicle wheel bearing apparatus of claim 11 wherein the drive shaft is separably connected to the inner member via the serration.

13. (Previously Presented) The semi-floating vehicle wheel bearing apparatus of claim 7 wherein a partition wall is located on an axis of the wheel hub in a direction toward an inner side end of the mounting flange.